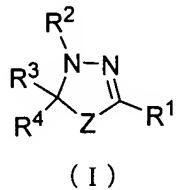


Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) An antitumor agent comprising a thiadiazoline derivative represented by the general formula (I), or a pharmacologically acceptable salt thereof as an active ingredient:



<wherein Z represents a sulfur atom or -S(=O)-, R¹ represents substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted aryl, a substituted or unsubstituted aromatic heterocyclic group, or -C(=W)R⁵ {wherein W represents an oxygen atom or a sulfur atom, and R⁵ represents a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, -YR⁶ (wherein Y represents an oxygen atom or a sulfur atom, and R⁶ represents a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted

lower alkynyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group), or $-\text{NR}^7\text{R}^8$ [wherein R^7 and R^8 are the same or different, and represent a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, a substituted or unsubstituted heterocyclic group, $-\text{OR}^9$ (wherein R^9 has the same meaning as that of the aforementioned R^6), or $-\text{NR}^{10}\text{R}^{11}$ (wherein R^{10} and R^{11} are the same or different, and represent a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group, or R^{10} and R^{11} are combined together with the adjacent nitrogen atom to form a substituted or unsubstituted heterocyclic group), or R^7 and R^8 are combined together with the adjacent nitrogen atom to form a substituted or unsubstituted heterocyclic group]}, R^2 represents a hydrogen atom, substituted or unsubstituted lower alkyl, or $-\text{C}(=\text{W}^1)\text{R}^{12}$ [wherein W^1 represents an oxygen atom or a sulfur atom, R^{12} represents a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, a substituted or unsubstituted heterocyclic group, $-\text{Y}^1\text{R}^{13}$

(wherein Y¹ represents an oxygen atom or a sulfur atom, and R¹³ represents substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group), or -NR¹⁴R¹⁵ (wherein R¹⁴ and R¹⁵ are the same or different, and represent a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group, or R¹⁴ and R¹⁵ are combined together with the adjacent nitrogen atom to form a substituted or unsubstituted heterocyclic group)],

R³ represents a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group, and

R⁴ represents substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group,

or R³ and R⁴ are combined together to represent

$-(CR^{16A}R^{16B})_{m1}-Q-(CR^{16C}R^{16D})_{m2}-$ {wherein Q represents a single bond,

substituted or unsubstituted phenylene, or cycloalkylene, m1 and m2 are the same or different, and each represents an integer of 0 to 4, with the proviso that m1 and m2 are not 0 at the same time,

R^{16A} , R^{16B} , R^{16C} and R^{16D} are the same or different, and represent a hydrogen atom, halogen, substituted or unsubstituted lower alkyl, - OR^{17} [wherein R^{17} represents a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, a substituted or unsubstituted heterocyclic group, - $CONR^{18}R^{19}$ (wherein R^{18} and R^{19} are the same or different, and represent a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group, or R^{18} and R^{19} are combined together with the adjacent nitrogen atom to form a substituted or unsubstituted heterocyclic group),

- $SO_2NR^{20}R^{21}$ (wherein R^{20} and R^{21} have the same meanings as those of the aforementioned R^{18} and R^{19} , respectively), or - COR^{22} (wherein R^{22} represents a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group)], -

NR²³R²⁴ [wherein R²³ and R²⁴ are the same or different, and represent a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, a substituted or unsubstituted heterocyclic group, -COR²⁵ (wherein R²⁵ represents a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, a substituted or unsubstituted heterocyclic group, substituted or unsubstituted lower alkoxy, substituted or unsubstituted aryloxy, amino, substituted or unsubstituted lower alkylamino, di-(substituted or unsubstituted lower alkyl)amino, or substituted or unsubstituted arylamino), or -SO₂R²⁶ (wherein R²⁶ represents substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group), or R²³ and R²⁴ are combined together with the adjacent nitrogen atom to form a substituted or unsubstituted heterocyclic group], or -CO₂R²⁷ (wherein R²⁷ represents a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, or a substituted or unsubstituted

or unsubstituted heterocyclic group), or R^{16A} and R^{16B} , or R^{16C} and R^{16D} are combined together to represent an oxygen atom, and when m1 or m2 is an integer of 2 or more, any of R^{16A} , R^{16B} , R^{16C} and R^{16D} may be the same or different, and any two of R^{16A} , R^{16B} , R^{16C} and R^{16D} which are bound to the adjacent two carbon atoms may combine together to form a bond}>.

2. (Original) The antitumor agent according to claim 1, wherein R^1 is substituted or unsubstituted lower alkynyl, substituted or unsubstituted aryl, or a substituted or unsubstituted aromatic heterocyclic group.

3. (Original) The antitumor agent according to claim 1, wherein R^1 is substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, or $-C(=W)R^5$ (wherein W and R^5 have the same meanings as those mentioned above).

4. (Original) The antitumor agent according to claim 1, wherein R^1 is substituted or unsubstituted aryl, or a substituted or unsubstituted aromatic heterocyclic group.

5. (Original) The antitumor agent according to claim 1, wherein R^1 is substituted or unsubstituted aryl.

6. (Original) The antitumor agent according to claim 1, wherein R¹ is substituted or unsubstituted lower alkynyl.

7. (Original) The antitumor agent according to claim 1, wherein R¹ is substituted or unsubstituted lower alkyl, or substituted or unsubstituted lower alkenyl.

8. (Currently Amended) The antitumor agent according to claim 1 ~~any one of claims 1 to 7~~, wherein R² is a hydrogen atom, substituted or unsubstituted lower alkyl, or -C(=W¹)R¹² (wherein W¹ and R¹² have the same meanings as those mentioned above, respectively).

9. (Currently Amended) The antitumor agent according to claim 1 ~~any one of claims 1 to 7~~, wherein R² is -C(=W¹)R¹² (wherein W¹ and R¹² have the same meanings as those mentioned above, respectively).

10. (Currently Amended) The antitumor agent according to claim 8 ~~or 9~~, wherein R¹² is substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, or substituted or unsubstituted cycloalkyl.

11. (Currently Amended) The antitumor agent according to claim 8
~~or 9~~, wherein R¹² is substituted or unsubstituted lower alkyl.

12. (Currently Amended) The antitumor agent according to claim 8
~~or 9~~, wherein R¹² is lower alkyl.

13. (Currently Amended) The antitumor agent according to claim 8
~~any one of claims 8 to 12~~, wherein W¹ is an oxygen atom.

14. (Currently Amended) The antitumor agent according to claim 1
~~any one of claims 1 to 13~~, wherein R³ is substituted or unsubstituted lower
alkyl, substituted or unsubstituted lower alkenyl, substituted or
unsubstituted lower alkynyl, substituted or unsubstituted cycloalkyl,
substituted or unsubstituted aryl, or a substituted or unsubstituted
heterocyclic group.

15. (Currently Amended) The antitumor agent according to claim 1
~~any one of claims 1 to 13~~, wherein R³ is substituted or unsubstituted lower
alkyl.

16. (Currently Amended) The antitumor agent according to claim 1
~~any one of claims 1 to 13~~, wherein R³ is substituted lower alkyl.

17. (Currently Amended) The antitumor agent according to claim 1
~~any one of claims 1 to 16, wherein R⁴ is substituted or unsubstituted~~
cycloalkyl, substituted or unsubstituted aryl, or a substituted or
unsubstituted heterocyclic group.

18. (Currently Amended) The antitumor agent according to claim 1
~~any one of claims 1 to 16, wherein R⁴ is substituted or unsubstituted aryl, or~~
a substituted or unsubstituted heterocyclic group.

19. (Currently Amended) The antitumor agent according to claim 1
~~any one of claims 1 to 16, wherein R⁴ is substituted or unsubstituted~~
phenyl, or substituted or unsubstituted thienyl.

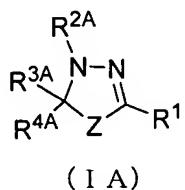
20. (Currently Amended) The antitumor agent according to claim 1
~~any one of claims 1 to 13, wherein R³ and R⁴ are combined together to~~
represent -(CR^{16A}R^{16B})_{m1}-Q-(CR^{16C}R^{16D})_{m2}- (wherein Q, R^{16A}, R^{16B}, R^{16C},
R^{16D}, m1 and m2 have the same meanings as those mentioned above,
respectively).

21. (Currently Amended) The antitumor agent according to claim 1
~~any one of claims 1 to 13, wherein R³ and R⁴ are combined together to~~
represent -(CH₂)_{m1}-Q-(CH₂)_{m2}- (wherein Q, m1 and m2 have the same
meanings as those mentioned above, respectively).

22. (Currently Amended) The antitumor agent according to claim 20
or 21, wherein Q is substituted or unsubstituted phenylene.

23. (Currently Amended) A mitotic kinesin Eg5 inhibitor comprising the thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 1 ~~any one of claims 1 to 22~~ as an active ingredient.

24. (Original) A thiadiazoline derivative represented by the formula (IA) or a pharmacologically acceptable salt thereof:



{wherein Z has the same meaning as that mentioned above,
R¹ has the same meaning as that mentioned above,
(A) when R¹ is substituted or unsubstituted lower alkyl, substituted or
unsubstituted lower alkenyl, or -C(=W)R⁵ (wherein W and R⁵ have the
same meanings as those mentioned above, respectively), R^{2A}, R^{3A} and R^{4A}
have the same meanings as those of the aforementioned R², R³ and R⁴
(with proviso that Z^A is a sulfur atom, R¹ is benzyl, R^{2A} is acetyl, one of R³
and R^{4A} is methyl, and the other of R³ and R^{4A} is not 2-oxopropyl),
respectively

(B) when R^1 is substituted or unsubstituted lower alkynyl, or a substituted or unsubstituted aromatic heterocyclic group, R^{2A} and R^{3A} have

the same meanings as those of the aforementioned R² and R³, respectively, and R^{4A} represents substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group, and

(C) when R¹ is substituted or unsubstituted aryl, R^{2A} represents -C(=W)R¹² (wherein W and R¹² have the same meanings as those mentioned above, respectively), R^{3A} represents -(CH₂)_kNHSO₂R^{3B} [wherein k represents an integer of 1 to 6, and R^{3B} represents substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, or -NR^{7B}R^{8B} (wherein R^{7B} and R^{8B} have the same meanings as those of the aforementioned R⁷ and R⁸, respectively)], -(CH₂)_kNR^{7C}R^{8C} (wherein k has the same meaning as that mentioned above, and R^{7C} and R^{8C} have the same meanings as those of the aforementioned R⁷ and R⁸, respectively), or -(CH₂)_kNHC(=O)R^{7D} (wherein k has the same meaning as that mentioned above, and R^{7D} has the same meaning as that of the aforementioned R⁷), and R^{4A} has the same meaning as that of the aforementioned R⁴].

25. (Original) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24, wherein Z is a sulfur atom.

26. (Currently Amended) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 or 25,

wherein R¹ is substituted or unsubstituted lower alkynyl, substituted or unsubstituted aryl, or a substituted or unsubstituted aromatic heterocyclic group.

27. (Currently Amended) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 or 25, wherein R¹ is substituted or unsubstituted aryl.

28. (Currently Amended) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 or 25, wherein R¹ is substituted or unsubstituted phenyl.

29. (Currently Amended) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 or 25, wherein R¹ is substituted or unsubstituted lower alkynyl.

30. (Currently Amended) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 or 25, wherein R¹ is substituted lower alkyl.

31. (Currently Amended) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 or 25,

wherein R¹ is -C(=W)R⁵ (wherein W and R⁵ have the same meanings as those mentioned above, respectively).

32. (Original) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 31, wherein W is an oxygen atom.

33. (Currently Amended) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 31 or ~~32~~, wherein R⁵ is -NR⁷R⁸ (wherein R⁷ and R⁸ have the same meanings as those mentioned above, respectively).

34. (Currently Amended) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 ~~any one of claims 24 to 33~~, wherein R^{2A} is -C(=O)R¹² (wherein R¹² have the same meanings as those mentioned above).

35. (Original) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 34, wherein R¹² is lower alkyl.

36. (Currently Amended) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 ~~any one of claims 24 to 35~~, wherein R^{3A} is substituted or unsubstituted lower alkyl.

37. (Currently Amended) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 any one of claims 24 to 35, wherein R^{3A} is $-(CH_2)_kNHSO_2R^{3B}$ (wherein k and R^{3B} have the same meanings as those mentioned above, respectively), - $(CH_2)_kNR^{7C}R^{8C}$ (wherein k , R^{7C} and R^{8C} have the same meanings as those mentioned above, respectively), or $-(CH_2)_kNHC(=O)R^{7D}$ (wherein k and R^{7D} have the same meanings as those mentioned above, respectively).

38. (Currently Amended) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 any one of claims 24 to 35, wherein R^{3A} is $-(CH_2)_kNHSO_2R^{3B}$ (wherein k and R^{3B} have the same meanings as those mentioned above, respectively).

39. (Currently Amended) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 any one of claims 24 to 38, wherein R^{4A} is substituted or unsubstituted aryl, or a substituted or unsubstituted aromatic heterocyclic group.

40. (Currently Amended) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 any one of claims 24 to 38, wherein R^{4A} is substituted or unsubstituted aryl.

41. (Currently Amended) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 any one of claims 24 to 38, wherein R^{4A} is substituted or unsubstituted phenyl, or substituted or unsubstituted thienyl.

42. (Currently Amended) The thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 any one of claims 24 to 38, wherein R^{4A} is phenyl.

43. (Currently Amended) A medicament comprising the thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 any one of claims 24 to 42 as an active ingredient.

44. (Currently Amended) A mitotic kinesin Eg5 inhibitor comprising the thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 any one of claims 24 to 42 as an active ingredient.

45. (Currently Amended) A therapeutic agent for a disease involving cell proliferation comprising the thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 any one of claims 24 to 42 as an active ingredient.

46. (Currently Amended) An antitumor agent comprising the thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 ~~any one of claims 24 to 42~~ as an active ingredient.

47. (Currently Amended) A method for therapeutic and/or preventive treatment of a malignant tumor which comprises administering an effective amount of the thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 1 ~~any one of claims 1 to 22~~.

48. (Currently Amended) A method for inhibiting a mitotic kinesin Eg5 which comprises administering an effective amount of the thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 1 ~~any one of claims 1 to 22~~.

49. (Currently Amended) Use of the thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 1 ~~any one of claims 1 to 22~~ for the manufacture of an antitumor agent.

50. (Currently Amended) Use of the thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 1 ~~any one of claims 1 to 22~~ for the manufacture of a mitotic kinesin Eg5 inhibitor.

51. (Currently Amended) A method for inhibiting a mitotic kinesin Eg5 which comprises administering an effective amount of the thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 ~~any one of claims 24 to 42~~.

52. (Currently Amended) A method for therapeutic and/or preventive treatment of a disease involving cell proliferation which comprises administering an effective amount of the thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 ~~any one of claims 24 to 42~~.

53. (Currently Amended) A method for therapeutic and/or preventive treatment of a malignant tumor which comprises administering an effective amount of the thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 ~~any one of claims 24 to 42~~.

54. (Currently Amended) Use of the thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 ~~any one of claims 24 to 42~~ for the manufacture of a mitotic kinesin Eg5 inhibitor.

55. (Currently Amended) Use of the thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 ~~any one of claims 24 to 42~~ for the manufacture of a therapeutic agent for a disease involving cell proliferation.

56. (Currently Amended) Use of the thiadiazoline derivative or a pharmacologically acceptable salt thereof according to claim 24 ~~any one of claims 24 to 42~~ for the manufacture of an antitumor agent.